# Author Index of Volume 50

Aarts, R. J., B45
Ahmed, K., 165
Ajongwen, J., B23
Akintoye, A., B23
Almeida, V., 115
Anabtawi, M. Z., 143
Atkinson, B., B9

Baluais, G., 69
Barker, P. E., B23
Barresi, A. A., 123
Berlan, J., 27
Bruno, L., 87

Chen, C. Y., B39
Chianese, A., 87
Chowdhury, H. M., 165

Delmas, H., 27
Di Berardino, F., 87
Dodds, J. A., 69

Fahidy, T. Z., 109
Frances, C., 87

Ganetsos, G., B23

Hung, S. L., 123

Jamialahmadi, M., 47

Kawalec-Pietrenko, B. T., B29
Kawase, Y., 1
Kiparissides, C., 95
Kortela, U., B45
Krishnaswamy, P. R., 159
Kumagai, T., 1

Le Goff, H., 169
Le Goff, P., 169
Lee, W. C., 79
Linko, P., B45
Lobo, L. S., 115

Melin, E., B17
Migiro, C. L. C., B1
Möller, S., B45
Müller-Steinhagen, H., 47

Nakayama, A., 33

O'Driscoll, K. F., 95

Penlidis, A., 95
Pfefferle, L. D., 123
Ponnuswamy, S. R., 95
Preece, P. E., 133

Rangaiah, G. P., 159
Rao, K. K., 9
Ratoarinoro, N., 27
Rauman-Aalto, P., B45

Sastri, S. R. S., 9
Schwarzer, B., 169
Shenoy, A. V., 33
Shieh, W. K., B17
Skoczylas, A., 149
Soetrisnanto, A., 169
Sokół, W., B1

Ti, H. C., 133

Umeno, S., 1
Urbański, A., 149
Uysal, B. Z., 143

Vital, J., 115

Webb, C., B9
Wilhelm, A. M., 27

Yang, Z. F., B39
Yu, S. Q., B39

Zimmels, Y., 59

# Subject Index of Volume 50

Aeration
time-dependent gas hold-up and bubble size distribution in a gas–highly viscous liquid–solid system, B29
Alcohol
effect of alcohol, organic acid and potassium chloride concentration on bubble size, bubble rise velocity and gas hold-up in bubble columns, 47

Bioreaction
bioreaction–separation on continuous chromatographic systems, B23
Bioreactors
operational range for a continuous stirred-tank bioreactor degrading an inhibitory substance, B1
Biotechnology
role of chemical engineering in biotechnology, B9
Bubble columns
prediction of gas hold-up in bubble column reactors: newtonian and non-newtonian fluids, 1
effect of alcohol, organic acid and potassium chloride concentration on bubble size, bubble rise velocity and gas hold-up in bubble columns, 47
Bubbles
time-dependent gas hold-up and bubble size distribution in a gas–highly viscous liquid–solid system, B29

Catalysts
methane combustion in a catalytically stabilized thermal burner, 123
Combustion
methane combustion in a catalytically stabilized thermal burner, 123
Composite energy density
use of the composite energy density for analysis of the stability of the composite phase in magnetized fluidized beds, 59
Composite phase
use of the composite energy density for analysis of the stability of the composite phase in magnetized fluidized beds, 59
Convection heat transfer
unified similarity transformation for Darcy and non-Darcy forced, free- and mixed-convection heat transfer in non-newtonian inelastic fluid-saturated porous media, 33
Cyclohexane
dehydrogenation of cyclohexane and cyclohexene over supported nickel and platinum catalysts, 165
Cyclohexene
dehydrogenation of cyclohexane and cyclohexene over supported nickel and platinum catalysts, 165

Darcy conditions
unified similarity transformation for Darcy and non-Darcy forced, free- and mixed-convection heat transfer in non-newtonian inelastic fluid-saturated porous media, 33
Dehydrogenation
dehydrogenation of cyclohexane and cyclohexene over supported nickel and platinum catalysts, 165
Diakoptics
large-scale fluid network analysis: mixed pressure and flow specifications, 133
Drainage rates
calculation of drainage rates of filter cakes with a two-phase flow model, 69

Enzymes
ARMAX modelling and state estimation of an enzyme fermentation process, B45
Esters
extraction of penicillin G with neutral phosphorus esters, B39
Ethanol production
continuous ethanol production from glucose using *Saccharomyces cerevisiae* immobilized on fluidized microcarriers, B17
Evaporators
new falling film evaporator with spiral fins, 169
Extraction
extraction of penicillin G with neutral phosphorus esters, B39

Fermentation
ARMAX modelling and state estimation of an enzyme fermentation process, B45
Filter cakes
calculation of drainage rates of filter cakes with a two-phase flow model, 69
Fluid network analysis
large-scale fluid network analysis: mixed pressure and flow specifications, 133
Fluidized beds
on the behaviour of a liquid fluidized bed of monosized sodium perborate crystals, 87
use of the composite energy density for analysis of the stability of the composite phase in magnetized fluidized beds, 59
Fluidized microcarriers
continuous ethanol production from glucose using *Saccharomyces cerevisiae* immobilized on fluidized microcarriers, B17

Gas hold-up
effect of alcohol, organic acid and potassium chloride concentration on bubble size, bubble rise velocity and gas hold-up in bubble columns, 47
gas hold-up in a bi-dimensional three-phase spouted bed, 143
prediction of gas hold-up in bubble column reactors: newtonian and non-newtonian fluids, 1
Glucose
continuous ethanol production from glucose using *Saccharomyces cerevisiae* immobilized on fluidized microcarriers, B17

Heat transfer
influence of vibrating element on heat transfer in a thin-layer evaporator, 149
solution method for a class of heat and mass transfer problems in a heterogeneous system, 79
Heterogeneous reaction
effects of ultrasound emitter type and power on a heterogeneous reaction, 27
Heterogeneous systems
solution method for a class of heat and mass transfer problems in a heterogeneous system, 79
Hydration
kinetic modelling with phase equilibria of $\alpha$-pinene hydration to terpine in isobutanol–water, 115

Kinetic modelling
kinetic modelling with phase equilibria of $\alpha$-pinene hydration to terpine in isobutanol–water, 115

Mass transfer
solution method for a class of heat and mass transfer problems in a heterogeneous system, 79
Methane
methane combustion in a catalytically stabilized thermal burner, 123
Microbiology
role of chemical engineering in biotechnology, B9
Modelling
ARMAX modelling and state estimation of an enzyme fermentation process, B45
polymer reaction engineering: modelling considerations for control studies, 95

Newtonian fluids
prediction of gas hold-up in bubble column reactors: newtonian and non-newtonian fluids, 1
Nickel
dehydrogenation of cyclohexane and cyclohexene over supported nickel and platinum catalysts, 165

Organic acid
effect of alcohol, organic acid and potassium chloride concentration on bubble size, bubble rise velocity and gas hold-up in bubble columns, 47
Organic liquids
new group contribution method for predicting viscosity of organic liquids, 9
Oxidization
operational range for a continuous stirred-tank bioreactor degrading an inhibitor substance, B1

Penicillin G
extraction of penicillin G with neutral phosphorus esters, B39

$\alpha$-Pinene
kinetic modelling with phase equilibria of $\alpha$-pinene hydration to terpine in isobutanol–water, 115
Platinum
dehydrogenation of cyclohexane and cyclohexene over supported nickel and platinum catalysts, 165
Polymer reaction engineering
polymer reaction engineering: modelling considerations for control studies, 95
Process control
polymer reaction engineering: modelling considerations for control studies, 95

Separation
bioreaction–separation on continuous chromatographic systems, B23
Set point weighting
set point weighting for simplified model predictive control, 159
Sodium perborate
on the behaviour of a liquid fluidized bed of monosized sodium perborate crystals, 87
Sonochemistry
effects of ultrasound emitter type and power on a heterogeneous reaction, 27
Spouted bed
gas hold-up in a bi-dimensional three-phase spouted bed, 143
Substrates
operational range for a continuous stirred-tank bioreactor degrading an inhibitory substance, B1
Sucrose
bioreaction–separation on continuous chromographic systems, B23
Suspensions
time-dependent gas hold-up and bubble size distribution in a gas–highly viscous liquid–solid system, B29

Tank-electrolyser cascades
study of performance and optimization of tank-electrolyser cascades, 109
Thin layer evaporator
influence of vibrating element on heat transfer in a thin-layer evaporator, 149

Ultrasound emitter type
effects of ultrasound emitter type and power on a heterogeneous reaction, 27

Vapour pressure
a new group contribution method for predicting viscosity of organic liquides, 9
Vibrating element
influence of vibrating element on heat transfer in a thin-layer evaporator, 149
Viscosity
new group contribution method for predicting viscosity of organic liquids, 9